

CLAIMS

1. A table saw having a cutting region for cutting workpieces, comprising:
 - a. a motor driving a movable cutting tool for cutting workpieces in the cutting region;
 - 5 b. a detection system adapted to detect one or more conditions; and
 - c. a reaction system associated with the detection system and the cutting tool wherein the reaction system is configured to retract the cutting tool at least partially away from the cutting region and to disengage the motor driving the cutting tool upon detection of at least one of one or more conditions by the detection system, wherein the
 - 10 cutting tool retracts independently of the motor.
2. The table saw of claim 1 wherein the one of more conditions is a proximity between a person and the cutting tool.
- 15 3. The table saw of claim 1 wherein the motor indirectly drives the cutting tool.
4. The table saw of claim 3 comprising a belt to drivingly connect the motor with the cutting tool when the cutting tool is in the cutting region.
- 20 5. The table saw of claim 1 further comprising a trunion that carries the motor and the cutting tool.
6. The table saw of claim 5 wherein the trunion has a first side and a second side and wherein the cutting tool is mounted on the first side and the motor is mounted on
- 25 the second side.
7. The table saw of claim 6 further comprising:
 - a. a motor shaft extending from the motor to the first side of the trunion;
 - b. an arbor carrying the cutting tool; and,
 - 30 c. a drive connecting the arbor and the shaft.

8. The table saw of claim 7 wherein the arbor is movable with respect to a top of the trunion.

9. The table saw of claim 8 wherein the arbor is in a driving engagement with the motor when the arbor is in a first position such that the cutting tool is in the cutting region.

10. The table saw of claim 9 wherein the arbor is out of driving engagement with the motor when the cutting tool is retracted.

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11. The table saw of claim 10 further comprising a swing arm pivotally connected to the first side of the trunion near a front of the trunion, wherein the swing arm has a first end and a second end such that the swing arm pivots about the first end.

12. The table saw of claim 11 wherein the swing arm moves independently of the motor.

13. The table saw of claim 11 further comprising a restraining mechanism associated with the first side of the trunion and the second end of the swing arm, wherein the restraining mechanism provides a force to retain the cutting tool in the cutting region.

14. The table saw of claim 12 further comprising an actuator to act on the second end of the swing arm with a force sufficient to overcome the force provided by the restraining mechanism.

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15. The table saw of claim 13 further comprising a stop provided on the first side of the trunion such that the swing arm is in contact with the stop when the cutting tool is retracted.

16. A table saw comprising:

- a. a frame adapted to support a workpiece in a cutting region;

- b. a movable cutting tool supported by the frame and configured to cut the workpiece in the cutting region;
- c. a motor configured to indirectly drive the cutting tool;
- d. a detection system configured to detect one or more conditions between a
5 person and the cutting tool; and
- e. a reaction system to cause the cutting tool to move out of the cutting region and to disengage driving engagement of the cutting tool, wherein the cutting tool moves independently of the motor.

10 17. A table saw comprising:

- a. a motor for driving a cutting means for cutting a workpiece;
- b. means for detecting a condition between a person and the cutting means;
and

15 c. means for retracting the cutting means away from the person in response to such detection of the condition, wherein the means for retracting further causes the cutting means to stop rotating and wherein the cutting means retracts independently of the motor.

20 18. A method for retracting a cutting tool from a table saw having a motor driving a movable cutting tool, the method comprising:

- a. detecting a condition between a person and the cutting tool; and
- b. retracting the cutting tool away from the person independently of any movement of the motor and disengaging driving engagement of the cutting tool in the event of detecting the condition.

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